

CLAIMS

1. A pharmaceutical administrative system comprising:
a pharmacy network including a pharmacy server and at least
one pharmacy client system, the at least one pharmacy client
system configured to accept and process orders for medications;
and

a service center network including a service center server
and a service center client system, the service center network
coupled to the pharmacy network and configured with a global
database including a plurality of formulary records;

wherein the service center server supplies the pharmacy
server at least one of the plurality of formulary records upon
request by a pharmacy client system when a order is processed.

2. The pharmaceutical administrative system of claim 1
wherein the global database further includes a plurality of order
records, each order record including order information for an
order accepted and processed by the at least one pharmacy client
system.

3. The pharmaceutical administrative system of claim 1
wherein the global database further includes a plurality of
customer records, each customer record including contact and
formulary information for at least one customer.

4. The pharmaceutical administrative system of claim 2
wherein the global database further includes a plurality of
patient records, each patient record including contact
information and medication history for at least one patient.

5. The pharmaceutical administrative system of claim 3
wherein the pharmacy client system is further configured to
generate medication specific label containing medication
identification information.

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6. The pharmaceutical administrative system of claim 5 wherein the pharmacy client system is configured to provide updates to the patient, customer, and formulary records in the global database.

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7. The pharmaceutical administrative system of claim 6 wherein updates to the formulary records include modification to the ingredients of the medication.

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8. The pharmaceutical administrative system of claim 7 wherein updates to the modification to the ingredients of the medication include changes to amounts of caloric content in the medication.

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9. The pharmaceutical administrative system of claim 7 wherein updates to the modification to the ingredients of the medication include changes to amounts and preferences of electrolytes in the medication.

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10. The pharmaceutical administrative system of claim 7 wherein the pharmacy client system is configured to verify the updates to the formulary records in the global database.

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11. The pharmaceutical administrative system of claim 7 wherein the medication specific label is for an intravenous solution and the medication identification information includes a refractive index associated with the intravenous solution.

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12. The pharmaceutical administrative system of claim 7 wherein the medication specific label is for an intravenous solution and the medication identification information includes a level of potassium associated with the intravenous solution.

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13. The pharmaceutical administrative system of claim 7 wherein the pharmacy client system is configured to generate a calcium phosphate solubility curve for an order accepted and processed by the at least one pharmacy client.

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14. The pharmaceutical administrative system of claim 6 further comprising a backup network including a backup server, the service center server replicating records of orders for medication and providing the records replicated to the backup server, the backup server storing the records replicated in a backup database and providing access to the backup database by the pharmacy network when the service center network is not available for a predetermined amount of time.

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15. The pharmaceutical administrative system of claim 6 wherein the pharmacy server is configured with a local database containing a subset of formulary records of the plurality of formulary records in the global database that specifically pertains to the pharmacy network.

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16. A pharmacy client system receiving and processing orders for medication, the pharmacy client system comprising:

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an order maintenance unit configured to create an order for medication for at least one customer and at least one patient;

a formulary unit coupled to the order maintenance and presenting information about the medication to the order maintenance unit;

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a customer unit coupled to the order maintenance unit and presenting information relating to contact and purchasing information for the at least one customer ordering the medication; and

a patient unit coupled to the order maintenance unit and the customer unit and presenting information relating to contact and medical information for the at least one patient;

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wherein the order maintenance unit is configured to modify the ingredients of the medication and to validate the modifications to the ingredients of the medication.

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17. The pharmacy client system of claim 16 wherein the medication is an intravenous solution.

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18. The pharmacy client system of claim 17 wherein the order maintenance unit is configured to validate the modifications to the ingredients by generating a calcium phosphate solubility curve for the medication.

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19. The pharmacy client system of claim 18 wherein the order maintenance unit is further configured to determine calcium and phosphate content in the medication and to compare the calcium and phosphate content to the calcium phosphate solubility curve for the medication.

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20. The pharmacy client system of claim 19 wherein the order maintenance unit is further configured to provide a warning when the calcium and phosphate content does not match the calcium phosphate solubility curve for the medication.

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21. The pharmacy client system of claim 20 wherein the order maintenance unit is configured to generate medication specific labels for the medication.

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22. The pharmacy client system of claim 21 wherein the medication specific labels for the medication includes information about a refractive index of the intravenous solution.

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23. The pharmacy client system of claim 22 wherein the medication specific labels for the medication includes

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information about a level of potassium in the intravenous
solution calculated using flame photometry.

5 24. The pharmacy client system of claim 23 wherein the
modifications to the ingredients of the medication includes
modifications to caloric content of the medication.

10 25. The pharmacy client system of claim 24 wherein the
order maintenance unit is configured to validate the
modifications to the caloric content in the medication by
comparing the modifications to predetermined amounts of caloric
content in predefined medications.

15 26. The pharmacy client system of claim 23 wherein the
modifications to the ingredients of the medication includes
modifications to electrolytes in the medication.

20 27. The pharmacy client system of claim 26 wherein the
order maintenance unit is configured to validate the
modifications to the electrolytes in the medication by comparing
the modifications to predetermined amounts of electrolytes in
predefined medications.

25 28. In a pharmaceutical administrative system, a method of
dispensing medication comprising:

30 creating a record for an order for a medication;
retrieving information regarding the medication;
generating a medication specific label including information
about the medication; and
validating the order for the medication.

35 29. The method of dispensing medication of claim 28 wherein
the medication is an intravenous solution.

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30. The method of dispensing medication of claim 29 wherein generating a medication specific label includes a refractive index of the intravenous solution.

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31. The method of dispensing medication of claim 29 wherein generating a medication specific label includes a level of potassium of the medication determined by using flame photometry.

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32. The method of dispensing medication of claim 30 further comprising:

testing the intravenous solution to determine the refractive index of the intravenous solution; and

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comparing the refractive index of the intravenous solution included with the generated medication specific label to the determined refractive index of the intravenous solution tested.

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33. The method of dispensing medication of claim 31 further comprising:

testing the medication to determine the level of potassium of the medication; and

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comparing the level of potassium of the medication included with the generated medication specific label to the determined level of potassium of the medication tested.

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34. The method of dispensing medication of claim 33 wherein testing the medication to determine the level of potassium of the medication is performed by using flame photometry.

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35. The method of dispensing medication of claim 29 wherein validating of the order comprises balancing caloric content of the medication.

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36. The method of dispensing medication of claim 29 wherein validating of the order comprises balancing percentages of electrolytes in the medication.

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37. The method of dispensing medication of claim 29 further comprising modifying ingredients in the medication.

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38. The method of dispensing medication of claim 29 wherein validating of the order comprises:

determining quantities of calcium and phosphate in the medication;

calculating the ratio of calcium to phosphate;

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comparing the ratio to predetermined amounts calcium and phosphate for the medication.

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39. The method of dispensing medication of claim 29 wherein validating of the order comprises:

determining quantities of calcium and phosphate in the medication;

determining percentages of amino acid, dextrose and drug additive in the medication;

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identifying predetermined calcium phosphate solubility curve data based on the percentages of amino acid, dextrose and drug additive in the medication;

generating a graphical representation of the calcium phosphate solubility curve data identified; and

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plotting the amount of calcium to the amount of phosphate relative to the graphical representation of the calcium phosphate solubility curve.

40. The method of dispensing medication of claim 38 further comprising:

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identifying other predetermined calcium phosphate solubility curve data similar to the predetermined calcium phosphate

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solubility curve data identified based on the percentages of
amino acid, dextrose and drug additive in the medication;

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selectively generating a graphical representation of one of
the other calcium phosphate solubility curve data identified.

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